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# Electrical & Electronics Abstracts

Science Abstracts Series B  
January - June 1997

Subject Index (A-L)

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# SIX-MONTHLY INDEXES TO ELECTRICAL & ELECTRONICS ABSTRACTS

Twice a year as part of their subscription to Electrical & Electronics Abstracts, subscribers receive cumulative indexes for the periods January-June and July-December. Each index is in two parts – a Subject Index, and an Author Index which comprises personal and corporate author indexes, and indexes to conferences and book titles. The List of Journals abstracted by INSPEC is also included with the July-December issue of the Author Index, while the supplement to that List is included with the January-June issue. Cumulative indexes for earlier years are also available: for details please see the inside back cover.

## Subject index

The Subject index provides an alphabetical subject key to the articles included in the abstracts journal. Some general guidance on its use is given below:

1. Look in the index for the name of the specific subject in which you are interested. In most cases this name will be a heading in the index and you will find relevant articles listed under it. The majority of the subject headings fall into the following categories: property, phenomena, substance or named objects, instruments, device, theory, method, process, application, event.
2. Occasionally you will be directed from the subject heading chosen to a different heading under which the relevant or additional articles are listed.
3. If you do not find the subject heading you first chose, try a more general heading.
4. Each entry under the heading relates to an article appearing in the abstracts journal and gives the serial number of that article in the journal, e.g. 12345 refers to abstract number 12345 for the period covered by the Index.

The language of the article, if it is not in English, is also indicated, e.g. excimer lasers, indust. appls. study (*Japanese*) 22081.

Each entry starts with a Keyword or Keyphrase considered to be most relevant to the heading. On sorting these Keywords, the qualifying prefixes are usually ignored (e.g.  $\alpha$ -brass, 5-sulphosalicylic, 31 Cygni, n-Ge are sorted under brass, sulphosalicylic, Cygni, Ge respectively).

There are three main Keyword lists: alphabetical A-Z, elementary particles, and chemical symbols (organic substances are written and not given as chemical formula). More than one Keyword list may be present under each subject heading.

For document on, say, 'photoemission of germanium' at least two access points 'photoemission' and 'germanium' are provided. Under the heading 'photoemission' the Keyword will be 'Ge' and under 'germanium' the Keyword will be 'photoemission'.

In a case like this, it is advisable and quicker to use the heading 'photoemission' and go straight to the chemical symbol list for 'Ge'.

Intermetallic compounds are indexed under the appropriate alloy headings. The chemical formula is used as Keyword. However, it is important to realise in searching the chemical symbol list that, at present, alloys and intermetallic compounds are sorted separately. For example FeCo is sorted at the end of the Fe-list e.g. Fe-Al,... Fe-Co,... Fe-Si,... Fe-Si-B,... FeCo,... FeSi and so on in this order.

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**INSPEC**  
THE INSTITUTION OF ELECTRICAL ENGINEERS

# Electrical & Electronics Abstracts

Science Abstracts Series B  
January – June 1997

## Subject Index (A-L)

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Abbreviations and Acronyms  
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# Abbreviations and Acronyms

Abbreviations and acronyms are used in the modifiers in all INSPEC Cumulative Subject Indexes. Individual terms should be readily understood in the context of the subject headings. **Inorganic substances** are usually given by their chemical formulae. Iron, aluminium and gallium garnets appear in the formula lists as MIG, MAG and MGG (where M is metal element, e.g. YIG and YAG); (Pb,La)(Zr,Ti)O<sub>3</sub> and Pb(Zr,Ti)O<sub>3</sub> appear as PLZT and PZT; ZrF<sub>4</sub>-BaF<sub>2</sub>-LaF<sub>3</sub>-AlF<sub>3</sub>-NaF and ZrF<sub>4</sub>-BaF<sub>2</sub>-LaF<sub>3</sub>-AlF<sub>3</sub>-NaF-PbF<sub>2</sub> appear as ZBLAN and ZBLANP. **Organic substances** including **liquid crystals** and **polymers** are not given as formulae but common abbreviations are used.

1D	one-dimensional	AM/FM	automated mapping/facilities management
2D	two-dimensional	AMLCD	active matrix liquid crystal display
2DEG	two-dimensional electron gas	AMPS	Advanced Mobile Phone System
3D	three-dimensional	AMPTE	active magnetospheric particle tracer explorers
4GL	fourth generation language	AMR	automatic meter reading
A/D	analogue-to-digital	AMS	accelerator mass spectroscopy
ABB	Asea Brown Boveri	ANA	automatic network analyser
ABC	aerial bundled cables/conductors	ANN	artificial neural network
ABS resin	acrylonitrile-butadiene-styrene resin	ANOVA	analysis of variance
AC	alternating current	ANS	Advanced Neutron Source
ACD	automatic call distribution	ANSI	American National Standards Institute
ACEL	AC electroluminescent	AOI	automatic optical inspection
ACI	adjacent channel interference	APACHE	Accelerator for Physics and Chemistry of Heavy Elements
ACRT	accelerated crucible rotation technique	APC	adaptive predictive coding
ACSR	aluminium conductor steel reinforced	APCM	adaptive pulse code modulation
ACT	acoustic charge transport	APCVD	atmospheric pressure CVD
ACTS	Advanced Communication Technology Satellite	APD	avalanche photodiode
ACTV	advanced compatible television	APFIM	atom probe field ion microscopy
ACV	air cushion vehicle	APK	amplitude phase keying
ADC	analogue-to-digital conversion	APL	A Programming Language
ADM	adaptive delta modulation	APS	Advanced Photon Source or appearance potential spectra (-oscopy)
ADP	administrative data processing	APW	augmented plane wave
ADPCM	adaptive differential PCM	APWR	advanced pressurised water reactor
ADS	automatic depressurisation system	ARMA	autoregressive moving average
ADTV	advanced definition television	ARMAX	autoregressive moving average exogenous
AE	acoustic emission	ARPA	Advanced Research Projects Agency
AES	Auger electron spectra (-oscopy)	ARPES	angle resolved photoemission spectra (-oscopy)
AF	audio frequency	ARQ	automatic repeat request
AFBC	atmospheric fluidised bed combustion	ART	adaptive resonance theory
AFC	automatic frequency control	ARUPS	angular resolved UPS
AFL	abstract family of languages	ASCII	American standard code for information interchange
AFM	atomic force microscopy	ASD	adjustable speed drives
AFMR	antiferromagnetic resonance	ASE	amplified spontaneous emission
AFR	away from reactor (spent fuel storage)	ASIC	application specific integrated circuit
AGB	asymptotic giant branch	ASK	amplitude shift keying
AGC	automatic gain control	ASPSK	antipodal Stokes parameters shift keying
AGN	active galactic nucleus (nuclei)	ASSP	application specific standard product
AGR	advanced gas-cooled reactor	AT&T	American Telephone & Telegraph
AGS	alternating gradient synchrotron	ATC	air traffic control
AGV	automatic guided vehicle	ATCS	Advanced Train Control System
AHP	analytic hierarchy process	ATE	automatic test equipment
AI	artificial intelligence	ATF	Advanced Toroidal Facility
AIN	advanced intelligent networks	ATM	asynchronous transfer mode or automatic teller machine or Axilrod-Teller-Moto
ALARA	as low as reasonably achievable	ATMS	assumption-based truth maintenance system
ALE	atomic layer epitaxy		
ALGOL	Algorithmic Language		
ALS	Advanced Light Source		
ALU	arithmetic logic unit		
ALV	autonomous land vehicle		
ALWR	advanced light water reactor		
AM	air mass number or amplitude modulation		



ATPG	automatic test pattern generation	Btx	Bildschirmtext
ATR	attenuated total reflection or automatic target recognition	BVP	boundary value problem
ATV	advanced television	BWG	beam waveguide
ATWS	anticipated transients without scram	BWIP	Basalt Waste Isolation Project
AVC	automatic volume control	BWO	backward wave oscillator
AVHRR	advanced very high resolution radiometer	BWR	boiling water reactor
AWGN	additive white Gaussian noise	BWT	backward wave tube
B-ISDN	broadband ISDN	C-V	capacitance-voltage
BAER	brainstem auditory evoked response	C/N	carrier-to-noise
BARITT	barrier injection transit time	C <sup>2</sup>	command and control
BASIC	Beginners' All-purpose Symbolic Instruction Code	C <sup>3</sup>	cleaved coupled cavity or command, control and communications
BAW	bulk acoustic wave	C <sup>3</sup> I	command, control, communications and intelligence
BBC	British Broadcasting Corporation	C <sup>3</sup> L	complementary constant current logic
BBD	bucket-brigade device	C <sup>4</sup>	command, control, communications and computers
BBGKY	Bogoliubov-Born-Green-Kirkwood-Yvon	C <sup>4</sup> I	command, control, communications, computers and intelligence
BCC	body centred cubic	CAA	computer aided analysis
BCD	binary-coded decimal	CAD	computer aided design
BCDMOS	bipolar-CMOS-DMOS	CADAT	computer aided design and testing
BCH	Bose-Chadhuri-Hocquenghem	CADD	computer aided draughting and design
BCS	Bardeen-Cooper-Schrieffer	CAE	computer aided engineering
BCT	body centred tetragonal	CAES	compressed air energy storage
BEBC	Big European Bubble Chamber	CAI	common air interface or computer assisted instruction
BEDT-TTF	bis(ethylenedithio)-tetrathiafulvalene (-inium)	CAIBE	chemically assisted ion beam etching
BEEM	ballistic electron emission microscopy	CAL	computer aided learning
BEM	boundary element method	CAM	computer aided manufacturing or content addressable memory
BEPC	Beijing Electron Positron Collider	CAMAC	computer automated measurement and control
BER	bit error rate	CANDU	Canadian deuterium uranium
BFL	buffered FET logic	CAPP	computer aided process (production) planning
BFN	beam-forming network	CAQ	computer aided quality assurance
BFO	beat-frequency oscillator	CAR	computer aided retrieval
BH	buried heterostructure	CARM	cyclotron autoresonance maser
BIBO	bounded input, bounded output	CARS	coherent anti-Stokes Raman scattering (spectra)
BiCMOS	bipolar CMOS	CASE	computer aided software engineering
BiFET	bipolar field effect transistor	CAT	computer assisted tomography or computerised axial tomography
BIL	buried injection logic	CATR	compact antenna test range
BILBO	built-in logic block observation	CATT	controlled avalanche transit transistor
BiMOS	bipolar metal-oxide-semiconductor	CATV	cable television or community antenna television
BIOS	basic input/output system	CAV	citizens band
BIS	bremsstrahlung isochromat spectroscopy	CBE	chemical beam epitaxy
BISDN	broadband ISDN	CBED	convergent beam electron diffraction
BISR	built-in self-repair	CBI	computer based instruction
BIST	built-in self-test	CBOOA	cyanobenzylidene octyloxylaniline
BIT	built-in test	CBR	case based reasoning
BJT	bipolar junction transistor	CBT	computer based training
BNFL	British Nuclear Fuels plc	CC	coupled channels
BOC	Bell Operating Company	CCBA	coupled channel Born approximation
BOD	bistable optical device	CCCS	current controlled current source
BOX	buried oxide	CCD	charge-coupled device
BP	backpropagation or British Petroleum	CCFL	counter current flow limiting (LOCA phenomenon)
BPSK	binary phase shift keying		
BPX	burning plasma experiment		
BRET	breeder reprocessing engineering test		
BSI	British Standards Institution		
BTA	Basic Technology Accelerator		
BTSC	Broadcast Television Systems Committee		



CCI	co-channel interference	CIDEP	chemically induced dynamical electron polarisation
CCII	second generation current conveyor	CIDNP	chemically induced dynamical nuclear polarisation
CCIR	International Radio Consultative Committee	CIM	computer integrated manufacture (-ing) or constituent interchange model
CCITT	International Telephone & Telegraph Consultative Committee	CIRC	cross-interleaved Reed-Solomon code
CCL	capacitor coupled logic	CISC	complex instruction set computer
CCS	common channel signalling or computer communications software or calculus of communicating systems	CIT	Compact Ignition Tokamak
CCTF	Cylindrical Core Test Facility	CLAN	cordless LAN
CCTR	Culham Conceptual Tokamak Reactor	CLC	cholesteric liquid crystal
CCTV	closed circuit television	CLOS	command-to-line-of-sight
CCVS	current controlled voltage source	CLV	constant linear velocity
CD	compact disc or critical dimension	CMI	computer managed instruction
CD-I	compact disc - interactive	CML	current-mode logic
CD-ROM	compact disc ROM	CMM	coordinate measuring machine
CD-V	compact disc - video	CMOS	complementary metal-oxide-semiconductor
CDFR	Commercial Demonstration Fast Reactor	CMS	cable management system
CDI	collector diffusion isolation	CNC	computerised numerical control
CDLC	cellular data link control	CNDO	complete neglect of differential overlap
CDM	code division multiplexing	CNR	carrier-to-noise ratio
CDMA	code division multiple access	COB	chip-on-board
CDP	common depth point	COBOL	Common Business Oriented Language
CDW	charge-density wave	COD	crack opening displacement
CEBAF	Continuous Electron Beam Accelerator Facility	COG	chip-on-glass
CECL	cascade-emitter coupled logic	COM	computer output to microform (fiche or film) or coupling of modes
CELP	code excited linear prediction	COMFET	conductivity-modulated field effect transistor
CEM	channel electron multiplier	CORDIC	coordinate rotation digital computer
CEMS	conversion electron Mossbauer spectra (-oscopy)	COVA	computer code validation
CEPA	coupled electron pair approximation	CP	charge, parity, time
CEPT	Conference of European Postal and Telecommunications	CP-MAS	cross-polarisation MAS
CERDIP	ceramic dual-in-line package	CPA	coherent potential approximation or critical path analysis
CERN	European Council for Nuclear Research	CPC	compound parabolic concentrator
CESAR	CERN Electron Storage and Accumulation Ring	CPE	customer premises equipment
CESR	conduction electron spin resonance	CPFSK	continuous phase FSK
CETI	contact with extraterrestrial intelligence	CPM	continuous phase modulation or critical path method
CFA	continued fraction approximation	CPN	coloured Petri net or customer premises network
CFAR	constant false alarm rate	CPSK	coherent phase shift keying
CFBC	circulating fluidised bed combustion	CPT	charge, parity, time
CFC	chlorofluorocarbon	CPU	central processing unit
CFG	context free grammar	CPW	coplanar waveguide
CFIE	combined field integral equation	CQPSK	coherent quadrature PSK
CFL	context free language	CRBR	Clinch River Breeder Reactor Project
CFSK	coherent frequency shift keying	CRC	cyclic redundancy check
CGA	Computer Graphics Adaptor	CRCW	concurrent read, concurrent write
CGH	computer-generated holography (-gram)	CRDA	control rod drop accident
CGTO	contracted Gaussian-type orbital	CREW	concurrent read, exclusive write
CHF	coupled Hartree-Fock	CRMA	cyclic reservation multiple access
CHILL	CCITT High Level Language	CRNL	Chalk River Nuclear Laboratories
CHO	Chinese hamster ovary	CRO	cathode ray oscilloscope
CHP	combined heat and power	CRSR	coherent resonant Stokes rotation
CI	configuration interaction	CRT	cathode ray tube
CID	charge injection device	CS	coupled states
		CSCW	computer supported cooperative work
		CSI	current source inverter



CSM	continuous slowing down models	DESIRE	diffusion enhanced silylating resist
CSMA	carrier sense multiple access	DESY	Deutsches Electron Synchrotron
CSMA/CD	CSMA with collision detection	DF	Dirac-Fock
CSP	channel substrate planar or communicating sequential processes or constraint satisfaction problem	DFB	distributed feedback
CSRS	coherent Stokes-Raman spectra (-oscopy)	DFF	decision feedback equaliser
CSSB/AM	companded single sideband amplitude modulation	DFT	discrete Fourier transform or design for testability
CSTR	continuous stirred tank reactor	DFWM	degenerate four-wave mixing
CT	computerised tomography or current transformer	DH	double heterostructure
CT1/2/3	cordless telephony (of 1st, 2nd, 3rd generation)	DHBT	double heterojunction bipolar transistor
CTD	charge transfer device	DHF	Dirac-Hartree-Fock
CTE	coefficient of thermal expansion	DHT	discrete Hartley transform
CTL	complementary-transistor logic	DIAL	differential-absorption lidar
CTR	controlled thermonuclear reactor	DIET	desorption induced by electronic transitions
CVD	chemical vapour deposition	DIL	dual-in-line
CVSDM	continuously variable slope delta modulation	DIP	dual in-line package
CW	continuous wave	DIS	deep inelastic scattering
CZ	Czochralski	DITE	Divertor in Torus Experiment
D/A	digital-to-analogue	DLA	diffusion limited aggregation
DAB	digital audio broadcasting	DLTS	deep level transient spectra (-oscopy)
DAC	digital-to-analogue conversion	DM	delta modulation
DACS	digital access and cross-connect system	DMA	direct memory access
DAD	digital audio disc	DMC	dynamic matrix control
DAMA	demand assigned multiple access	DMM	digital multimeter
DARMA	deterministic autoregressive moving average	DMOS	double-diffused metal-oxide-semiconductor
DASD	direct access storage device	DMSK	differential minimum shift keying
DAT	digital audio tape	DMSO	dimethylsulphoxide
DATAAC	digital autonomous terminal access communication	DNA	deoxyribonucleic acid or Digital Network Architecture
DAW	dry active waste	DNMR	double nuclear magnetic resonance
DBMS	database management system	DNTS	digital data exchange network testing system
DBR	distributed Bragg reflector	DOA	direction of arrival
DBS	direct broadcasting by satellite	DOBAMBC	p-decyloxybenzylidene p'-amino 2-methyl butyl cinnamate
DC	direct current	DoD	Department of Defense (USA)
DC-PBH	double-channel PBH	DOE	Department of Energy (USA)
DCEL	direct current electroluminescent	DOF	degree(s) of freedom
DCFL	direct-coupled FET logic	DOPSK	differential offset phase shift keying
DCG	dichromated gelatin	DORIS	Doppel-Ring-Speicher
DCLC	drift cyclotron loss cone (instability)	DOS	disc operating system or density of states
DCS	digital cross-connect system	DOVETT	double velocity transit time
DCT	discrete cosine transform	DP	data processing
DCTL	direct-coupled transistor logic	DPCM	differential pulse code modulation
DCVS	differential cascode voltage switch	DPDA	deterministic pushdown automaton
DDC	direct digital control	DPPC	dipalmitoyl phosphatidyl chloride
DDL	diode-diode logic	DPPH	diphenylpicrylhydrazyl
DDS	direct digital synthesis	DPSK	differential phase shift keying
DECENT	distribution of exact classical energy transfer	DQDB	distributed queue dual bus
DECT	digital European cordless telephone (telecommunication)	DQPSK	differential quadrature PSK
EDDS	discrete event dynamic system	DRAM	dynamic random access memory
DEFT	density functional theory	DRO	dielectric resonator oscillator
DENOX	nitrogen oxides removal	DS-SS	direct sequence spread spectrum
DES	data encryption standard	DS-SSMA	direct sequence SSMA
		DSA	digital subtraction angiography
		DSAM	Doppler shift attenuation method
		DSB	double sideband
		DSC	differential scanning calorimetry
		DSI	digital speech interpolation
		DSL	digital subscriber line



DSM	demand side management	EFL	emitter-follower logic or emitter function logic
DSO	digital storage oscilloscope	EFM	extended Flygare method
DSP	digital signal processor (-ing)	EFT	electronic funds transfer
DSS	decision support system or digital subscriber signalling	EGA	Enhanced Graphics Adaptor
DTA	differential thermal analysis	EGG	electrogastrography (-gram)
DTL	diode transistor logic	EHD	electrohydrodynamics
DTMF	dual tone multi-frequency	EHDTV	enhanced high definition TV
DTP	desktop publishing	EHF	extremely high frequency
DTPP	Demonstration Tokamak Power Plant	EHP	electron-hole potential method
DTU	dual topological unitarisation	EHT	extended Huckel theory or extra high tension
DV-X $\alpha$	discrete variational X $\alpha$	EHV	extra high voltage
DVI	digital video interactive	EIRP	equivalent isotropically radiated power
DVM	digital voltmeter	EIS	electrochemical impedance spectroscopy
DWBA	distorted wave Born approximation	EKF	extended Kalman filter
DWIA	distorted wave impulse approximation	EKG	electrokymography (-gram)
DWPF	Defence Waste Processing Facility	ELDOR	electron electron double resonance
E1	electric dipole	ELF	extremely low frequency
E2	electric quadrupole	ELO	epitaxial lateral overgrowth
E2PROM	electrically erasable PROM	EM	electromagnetic or expectation-maximisation
EAROM	electrically alterable ROM	EMC	electromagnetic compatibility or European Muon Collaboration
EAS	extensive air shower	EMF	electromotive force
EAX	electronic automatic exchange	EMG	electromyography (-gram)
EB	exponential Born	EMI	electromagnetic interference
EBBA	4-ethoxybenzylidene-4n-butylaniline	EMP	electromagnetic pulse
EBIC	electron beam induced current(s)	EMS	energy management system
EBL	explanation based learning	EMTP	electromagnetic transients program
EBR	experimental breeder reactor	ENDOR	electron nuclear double resonance
EBT	Elmo Bumpy Torus	ENEL	Ente Nazionale per l'Energia Elettrica (Italian National Electric Energy Agency)
EBU	European Broadcasting Union	ENG	electronic news gathering
ECC	emergency core cooling or error correction code	ENSO	El Nino - Southern Oscillation
ECCM	electronic counter-counter measures	EOF	end-of-file
ECCS	emergency core cooling system	EOG	electrooculography (-gram)
ECELR	Epithermal Critical Experiment Laboratory Reactor	EOQ	economic order quantity
ECG	electrocardiography (-gram)	EOS	electrical overstress
ECL	emitter coupled logic	EPA	Environmental Protection Agency (USA)
ECM	electronic countermeasures	EPLD	electrically programmable logic device
ECMWF	European Centre for Medium Range Weather Forecasts	EPMA	electron probe microanalysis
ECOG	electrocortigraphy (-gram)	EPR	Einstein-Podolsky-Rosen or electron paramagnetic resonance or ethylene propylene rubber
ECR	electron cyclotron resonance	EPRI	Electric Power Research Institute
ECRH	electron cyclotron resonance heating	EPROM	erasable PROM
EDA	ethylene diamine or electronic design automation	ERBE	Earth Radiation Budget Experiment
EDAX	energy dispersive X-ray analysis	ERG	electroretinography (-gram)
EDF	Electricite de France	ES	expert system
EDI	electronic data interchange	ESA	European Space Agency
EDIF	electronic data interchange format	ESCA	electron spectroscopy for chemical analysis
EDP	electronic data processing	ESCAR	Experimental Superconducting Accelerating Ring
EDTA	ethylene diamine tetra-acetic acid	ESD	electron stimulated desorption or electrostatic discharge
EDTV	extended definition TV	ESDIAD	electron stimulated desorption ion angular distributions
EDW	electron density wave	ESF	engineering safety features
EDX	energy dispersive X-ray		
EEG	electroencephalography (-gram)		
EELFS	electron energy loss fine structure		
EELS	electron energy loss spectra (-oscopy)		
EEPLD	electrically erasable PLD		
EEPROM	electrically erasable PROM		
EFG	edge-defined film fed growth		
EFIE	electric field integral equation		



ESM	electronic support measures	FIB	focused ion beam
ESOC	European Space Operations Centre	FIFO	first in, first out
ESP	electrostatic precipitators	FIM	field ion microscopy
ESPI	electronic speckle pattern interferometry	FIMOS	floating gate ionisation injection metal-oxide-semiconductor
ESPRIT	estimation of signal parameters by rotational invariance techniques <i>or</i> European Strategic Programme for Research in Information Technology	FIPOS	full isolation by porous oxidised silicon
ESR	electron spin resonance	FIR	far infrared <i>or</i> finite impulse response
ESS	electronic switching system	FISO	fast in, slow out
ESTELLE	Extended State Transition Language	FITL	fibre in the loop
ET	bis(ethylenedithio)-tetrathiafulvalene	FLC	ferroelectric liquid crystal
ETA-II	Engineering Test Accelerator-II	FLCD	ferroelectric liquid crystal display
ETACS	Extended Total Access Communications System	FLIR	forward looking infra-red
ETM	engineering test model	FLL	frequency locked loop
ETSI	European Telecommunications Standards institute	FLOPS	floating point operation(s) per second
ETV	enhanced TV	FLOTOX	floating-gate tunnel oxide
EUV	extreme ultraviolet	FM	frequency modulation
EW	electronic warfare	FMEA	failure mode and effects analysis
EX-OR	exclusive OR (logic)	FMECA	failure modes effects and criticality analysis
EXAFS	extended X-ray absorption fine structure	FMIT	Fusion Materials Irradiation Test Facility
FAMOS	floating gate avalanche MOS	FMR	ferromagnetic resonance
FBC	fluidised bed combustion	FMS	flexible manufacturing system <i>or</i> flight management system
FBL	fly-by-light	FORTAN	Formula Translation (language)
FBR	fast breeder reactor	FOV	field of view
FCC	face centred cubic <i>or</i> Federal Communications Commission (USA)	FPA	focal plane array
FCFS	first come first served	FPC	fusion power core
FCI	fuel-cladding interaction	FPGA	field programmable gate array
FCT	field controlled thyristor	FPLA	field programmable logic array
FDD	floppy disc drive	FPT	finite perturbation theory
FDDI	fibre distributed data interface	FQHE	fractional quantum Hall effect
FDM	frequency division multiplex(ing)	FRED-FET	fast recovery epitaxial diode FET
FDMA	frequency division multiple access	FRMR	field reversed mirror reactor
FDNC	frequency dependent negative conductance	FSDE	fission suppressed direct enrichment (breeder blanket)
FDNR	frequency dependent negative resistance	FSGO	floating spherical Gaussian orbitals
FDTD	finite difference time-domain	FSK	frequency-shift keying
FEA	finite element analysis	FSS	fixed satellite service <i>or</i> frequency selective surface
FEC	forward error correction	FT	Fourier transform
FECL	feedback ECL	FTIR	Fourier transform infrared <i>or</i> frustrated total internal reflection
FED	Fusion Engineering Device (USA)	FTR	Fast Test Reactor
FEDC	Fusion Engineering Device Centre (USA)	FTTC	fibre-to-the-curb
FEL	free electron laser	FTTH	fibre-to-the-home
FEM	field emission microscopy <i>or</i> finite element method	FWHM	full width half maximum
FER	Fusion Experimental Reactor (Japan)	GAMBIT	gate modulated bipolar transistor
FET	field effect transistor	GANIL	Grand Accelérateur National à Ions Lourds
FFH	fast frequency hopping	GASH	guanidine aluminium sulphate hexahydrate
FFHR	fusion-fission hybrid reactor	GCC	gasification combined cycle
FFT	fast Fourier transform	GCFR	gas-cooled fast breeder reactor
FFTF	Fast Flux Test Facility	GCHWR	gas cooled heavy water moderated reactor
FGD	flue gas desulphurisation	GCM	general circulation model <i>or</i> generator coordinate method
FH-SS	frequency hopped spread spectrum	GCR	group code recording
FH-SSMA	frequency hopped SSMA	GDR	giant dipole resonance
FHNC	Fermi hypernetted chain	GEO	geostationary orbit
		GETR	General Electric Test Reactor
		GF	Galois field



GHF-NO-CI	generalised Hartree-Fock/natural orbital/configuration interactions	HEU	highly enriched uranium (93% U <sup>235</sup> )
GIAO	gauge-invariant atomic orbitals	HEU/Th	highly enriched U/Th fuel
GIC	generalised immittance convertor <i>or</i> graphite intercalation compound	HEXFET	hexagonal MOSFET
GIDL	gate induced drain leakage	HF	Hartree-Fock <i>or</i> high frequency
GIS	gas insulated system (substation <i>or</i> switchgear) <i>or</i> geographic information system	HFEF	Hot Fuel Examination Facility
GITL	gas insulated transmission line	HFET	heterojunction field effect transistor
GKS	Graphical Kernel System	HFIR	high flux isotope reactor
GMDH	group method of data handling	HFITR	High Field Ignition Test Reactor
GMR	giant monopole resonance	HFS	Hartree-Fock-Slater <i>or</i> hyperfine structure
GMSK	Gaussian filtered MSK	HGMS	high gradient magnetic separation
GO	Gaussian orbitals <i>or</i> geometrical optics	HI	heavy ion
GP	Guinier-Preston	HID	high intensity discharge
GPED	gas phase electron diffraction	HIFET	heterointerface field effect transistor
GPIB	general purpose interface bus	HIGFET	heterostructure insulated gate FET
GPM	ground potential model	HIP	hot isostatic pressing
GPS	Global Positioning System	HIPPI	high performance parallel interface
GQR	giant quadrupole resonance	HIXE	heavy ion induced X-ray emission
GR	general relativity	HJBT	heterojunction bipolar transistor
GRIN	graded (gradient) refractive index	HJFET	heterojunction field effect transistor
GSM	global system for mobile communications <i>or</i> Groupe Speciale Mobile	HLL	high level language
GSMBE	gas source molecular beam epitaxy	HLLW	high level liquid waste
GSPC	gas scintillation proportional chamber (counter)	HLW	high level waste
GT	group technology	HMC	hidden Markov chain
GTD	geometrical theory of diffraction	HMM	hidden Markov model
GTHTGR	gas turbine HTGR	HMO	Huckel molecular orbitals
GTO	gate turn-off <i>or</i> Gaussian-type orbitals	HMOS	high-performance metal-oxide-semiconductor
GUI	graphical user interface	HMTSeF	hexamethylenetetraselenafulvalene (-inium)
GUT	grand unified theory	HMTTF	hexamethyltetraethiofulvalene (-inium)
GVb	generalised valence bond	HOAB	heptyloxyazoxybenzene
		HOE	holographic optical elements
HAWT	horizontal axis wind turbines	HOMO	highest occupied molecular orbitals
HBM	human body model	HPCI	high pressure coolant injection
HBS	home bus system	HPCS	high-pressure core sprays
HBT	heterojunction bipolar transistor <i>or</i> N-(p-hexyloxybenzylidene)-p-toluidene	HREELS	high resolution EELS
HCDA	hypothetical core disruptive accident	HREM	high resolution electron microscopy
HCI	human-computer interaction	HSLA	high strength low alloy (steel)
HCMOS	high speed complementary MOS	HSLAN	high speed LAN
HCP	hexagonal close packed	HT	high tension
HCSEL	horizontal cavity surface emitting laser	HTGR	high temperature gas-cooled reactor
HD-MAC	high definition MAC	HTGRSC/C	HTGR steam cycle cogeneration
HD-VCR	high definition VCR	HTSC	high temperature superconductor
HDD	hard disc drive	HTTR	High Temperature Engineering Test Reactor
HDI	high density interconnect	HUD	head-up display
HDL	hardware description language	HV	high voltage
HDLC	high level data link control	HVAC	heating, ventilation and air conditioning <i>or</i> high voltage alternating current
HDMI	high-density multichip interconnect	HVDC	high voltage direct current
HDPE	high density polyethylene	HVEM	high voltage electron microscopy
HDSL	high bit-rate digital subscriber lines	HVIC	high voltage integrated circuit
HDTV	high definition television	HWLWR	heavy water moderated LWR
HEED	high energy electron diffraction	HWR	heavy water reactor
HeLa	Henrietta Lacks	HZE	high Z and energy
HEMP	high altitude electromagnetic pulse	HZP	hot zero power
HEMT	high electron mobility transistor	I-V	current-voltage
HET	hot electron transistor	i.i.d.	independently identically distributed
		I/O	input/output
		I <sup>2</sup> L	integrated injection logic
		I <sup>3</sup> L	isoplanar I <sup>2</sup> L

IAEA	International Atomic Energy Agency	INTELSAT	International Telecommunications Satellite Consortium
IAR	isobaric analogue resonance	INTOR	International Tokamak Reactor
IAS	isobaric analogue state	INTUG	International Trade and User Group
IBA	interacting boson approximation	IOC $\omega$	inclusion of the overlap charges in the omega
IBCN	integrated broadband communication network	IPSE	integrated programming support environment <i>or</i> integrated project support environment
IBFA	interacting boson-fermion approximation	IPSS	international packet switching system
IBM	interacting boson model <i>or</i> International Business Machines	IR	infrared
IBPBAC	isobutyl-4-(4'-phenylbenzylidene-amino) cinnamate	IRBIC	infrared beam induced current(s) (contrast)
IBT	insulated base transistor	IREB	intense relativistic electron beam
IC	integrated circuit	IRED	infrared emitting diode
ICB	ionised cluster beam	IRS	information retrieval system
ICDF	intermediate coupling Dirac-Fock	IS	information system
ICF	inertial confinement fusion	ISABELLE	intersecting storage and acceleration
ICMA	idle signal casting multiple access	ISAR	inverse synthetic aperture radar
ICP	inductively coupled plasma	ISDN	integrated services digital network
ICPP	Idaho Chemical Processing Plant	ISDSN	integrated services digital satellite network
ICRF	ion cyclotron range of frequencies	ISFET	ion-sensitive field effect transistor
ICRH	ion cyclotron resonance heating	ISI	intersymbol interference
ICTS	isothermal capacitance transient spectra(-oscopy)	ISL	integrated Schottky logic <i>or</i> inter-satellite links
IDDQ	quiescent power supply current	ISO	International Standards Organization
IDFL	integral diode FET logic	ISR	intersecting storage ring
IDT	interdigital transducer	ISS	ion scattering spectroscopy
IDTV	improved definition television	ISX	impurity study experiment
IEC	interexchange carrier <i>or</i> International Electrotechnical Commission	IT	information technology
IEPA	independent electron pair approximation	ITC	ionic thermocurrents
IETS	inelastic electron tunnelling spectra (-oscopy)	ITEP	Institute of Theoretical and Experimental Physics
IF	intermediate frequency	ITO	indium tin oxide
IFA	ionisation front accelerator	ITR	Ignition Test Reactor
IFE	intelligent front end	ITU	International Telecommunication Union
IFM	instantaneous frequency measurement	IU	Indiana University (USA)
IGBT	insulated gate bipolar transistor	IVO	improved virtual orbitals
IGCC	integrated gasification combined cycle	IVP	initial value problem
IGES	Initial Graphics Exchange Specification	J $^{\pi}$	spin/parity (nuclear levels)
IGFET	insulated gate field effect transistor	JAERI	Japan Atomic Energy Research Institute
IGT	insulated gate transistor	JCL	job control language
IHEP	Institute of High Energy Physics	JET	Joint European Torus
IIR	infinite impulse response	JFET	junction field effect transistor
IKBS	intelligent knowledge based system	JINR	Joint Institute for Nuclear Research
IKO	Institute v. Kernph Ouder (Amsterdam)	JIT	just-in-time
ILS	instrument landing system	JT-60	Japanese Tokamak-60
ILW	intermediate level (radioactive) waste	JTIDS	Joint Tactical Information Distribution System
IMD	intermodulation distortion		
IMPATT	impact avalanche transit time	KBS	knowledge based system
IN	intelligent network	KdV	Korteweg-de Vries
INDO	incomplete neglect of differential overlap	KEK	Japan National Laboratory for High Energy Physics
INDOR	internuclear double resonance	KKR	Korringa-Kohn-Rostoker
INEPT	insensitive nuclei enhanced by polarisation transfer		
ING	intense neutron generator	LAMPF	Los Alamos Meson Physics Facility
INO	iterative natural orbital	LAN	local area network
INS	inertial navigation system <i>or</i> Information Network System	LATA	local access and transport area
		LAWN	local area wireless network



LB	Langmuir-Blodgett	LOCOS	local oxidation of silicon
LBIC	light beam induced current(s)	LOF	loss of flow
LBLOCA	large break LOCA	LOFT	Loss of Flow Test Facility
LC	inductance-capacitance	LOFW	loss of feed water
LCA	logic cell array	LONA	low noise amplifier
LCAO	linear combination of atomic orbitals	LOOSP	loss of onsite power
LCBO	linear combinations of (semi-localised) leadless chip carrier	LOS	line of sight
LCCC	leadless ceramic chip carrier	LOTOS	Language Of Temporal Ordering Specification
LCD	liquid crystal display/device	LP	linear programming
LCI	load commutated inverter	LPC	linear predictive coding
LCP	Large Coil Program or least cost planning	LPCS	low pressure core spray
LCTF	Large Coil Test Facility	LPCVD	low pressure CVD
LD	laser diode	LPE	liquid phase epitaxy
LDA	laser Doppler anemometry (-meter) or local density approximation	LPFL	low pinchoff-voltage FET logic
LDD	lightly doped drain	LPI	low probability of intercept
LDI	lossless discrete integrator	LQG	linear quadratic Gaussian
LDPE	low density polyethylene	LRO	long-range order
LDV	laser Doppler velocimetry (-meter)	LSA	least squares approximation or limited space charge accumulation
LEAR	Low Energy Antiproton Ring	LSD	local spin density or loop shut-down
LEC	liquid encapsulated Czochralski or local exchange carrier	LSI	large-scale integration
LED	light emitting diode	LSPB	Large Scale Prototype Breeder
LEED	low energy electron diffraction	LSSD	level sensitive scan design
LEFD	Large Experimental Fusion Device	LSTF	Large Scale Test Facility
LEIS	low energy ion scattering	LTE	local thermodynamic equilibrium
LEMP	lightning electromagnetic pulse	LTi	linear time invariant
LEO	low-Earth-orbit	LTR	loop transfer recovery
LEP	Large Electron Positron (CERN)	LUMO	lowest unoccupied molecular orbitals
LET	linear energy transfer	LV	low voltage
LEU	low enrichment uranium (10% U <sup>235</sup> )	LWBR	light water breeder reactor
LEU/Th	low enrichment U/Th fuel	LWHCR	light water high convertor reactor
LF	low frequency	LWR	light water reactor
LFSR	linear feedback shift register	M1	magnetic dipole
LGA	land grid array	M2	magnetic quadrupole
LHC	Large Hadron Collider (CERN)	MAC	multiplexed analogue components or media access control
LHPG	laser heated pedestal growth	MAG	metal arc gas
LHRH	lower hybrid resonance heating	MAGFET	magnetic field sensitive FET
LIF	laser induced fluorescence	MAGLEV	magnetic levitation
LIFO	last in, first out	MAN	metropolitan area network
LIM	linear induction motor	MAP	Manufacturing Automation Protocol
LIME	laser induced magnetically enhanced	MARS	Mirror Advanced Reactor Study
LINAC	linear accelerator	MAS	magic angle spinning
LISP	List Processor (language)	MATE	modular automatic test equipment
LLTR	Large Leak Test Rig	MBBA	4-methoxybenzylidene-4'n-butylaniline
LLW	low level (radioactive) waste	MCB	meteor burst communication
LMC	Large Magellanic Cloud	MBE	molecular beam epitaxy
LME	liquid metal embrittlement	MBPT	many body perturbation theory
LMFBR	liquid metal fast breeder reactor	MBR	model based reasoning
LMIS	liquid metal ion source	MCCB	moulded-case circuit breakers
LMR	liquid metal reactor	MCCI	molten core-concrete interaction
LMS	least mean square	MCD	magnetic circular dichroism
LMSS	land mobile satellite system	MCFC	molten carbonate fuel cell
LMTO	linear combination of muffin tin orbitals	MCFR	magnetic confinement fusion reactor
LMXB	low-mass X-ray binary	MCM	multichip module
LNA	low noise amplifier	MCP	microchannel plate
LNB	low noise block	MCSCF	multiconfiguration SCF
LNG	liquified natural gas	MCVD	modified chemical vapour deposition
LO	local oscillator or longitudinal optical	MCX $\alpha$	multiconfiguration X $\alpha$
LOCA	loss of coolant accident	MDS	maximum distance separable
LOCE	loss of coolant experiment	MEC	molecular electron correlation(s)



MEG	magnetoencephalography (-gram)	MOCVD	metal-organic chemical vapour deposition
MEMS	microelectromechanical system	MODFET	modulation doped FET
MESFET	metal-semiconductor FET	MODOR	microwave-optical double resonance
MEU	medium enrichment uranium (20% U <sup>235</sup> )	MODPOT	modulator potential
MEU/Th	medium enrichment U/Th fuel	MOMBE	metal-organic MBE
MF	medium frequency	MONOS	metal-oxide-nitride-oxide-semiconductor
MFIE	magnetic field integral equation	MOPA	master oscillator power amplifier
MFM	magnetic force microscopy	MORB	mid-ocean ridge basalt
MFP	mean free path	MOS	metal-oxide-semiconductor
MFR	mirror fusion reactor	MOSFET	metal-oxide-semiconductor FET
MFSK	multiple frequency shift keying	MOST	metal-oxide-semiconductor transistor
MFTF	Mirror Fusion Test Facility	MOV	metal oxide varistor
MHD	magnetohydrodynamics	MOVPE	metal-organic vapour phase epitaxy
MHS	message handling system	MOX	mixed oxide fuel
MHTGR	modular HTGR	MPH	moving plasmoid heater
MIC	microwave integrated circuit	MPSK	multiple phase shift keying
MID	magnetically insulated diode	MPU	microprocessing unit
MIDI	musical instrument digital interface	MQORC	modified quadrature overlapped raised cosine
MIDP	microwave induced delayed phosphorescence	MQW	multiple quantum well
MIG	metal inert gas <i>or</i> metal-in-gap	MRAC	model reference adaptive control
MIL-STD	military standard	MRC	minimum resolvable contrast
MIM	metal-insulator-metal	MRD	multiple-reference double excitation
MIMD	multiple input (instruction), multiple data	MRI	magnetic resonance imaging
MIMIC	millimetre-wave monolithic integrated circuit	MRINDO	modified Rydberg INDO
MIMO	multiple input, multiple output	MRP	manufacturing resources planning <i>or</i> materials requirements planning
MIN	multiprocessor interconnection network	MRS	monitored retrievable storage (radioactive waste)
MIND	mass impregnated non-draining	MRT	minimum resolvable temperature
MINDO	modified incomplete NDO	MS	management science
MIPS	million instructions per second	MSE	mean square error
MIS	management information system' <i>or</i> metal-insulator-semiconductor	MSI	medium scale integration
MISFET	metal-insulator-semiconductor FET	MSK	minimum shift keying
MISO	multiple input, single output	MSM	metal-semiconductor-metal
MIT	Massachusetts Institute of Technology (USA)	MSR	molten salt reactor
MITATT	mixed tunnelling avalanche transit time	MSSM	minimal supersymmetric standard model
ML	machine language <i>or</i> meta-language	MSSW	magnetostatic surface wave
MLB	multilayer board	MSU	Michigan State University
MLC	multilayer ceramic	MSW	magnetostatic waves
MLE	maximum likelihood estimation	MSX $\alpha$	multiple scattering X $\alpha$
MLE	molecular layer epitaxy <i>or</i> maximum likelihood estimation	MT	machine translation <i>or</i> magnetotelluric
MLP	multiple layer perceptron	MTBF	mean time between failures
MLS	microwave landing system	MTF	modulation transfer function
MLSE	maximum likelihood sequence estimation	MTI	moving target indicator
MLTF	multilayer thick film	MTL	merged-transistor logic
MLW	medium level (radioactive) waste	MTTF	mean time to failure
MM	millimetre	MTTR	mean time to repair
MMF	magnetomotive force	MTX $\alpha$	muffin-tin X $\alpha$
MMI	man-machine interface	$\mu$ CF	muon catalysed fusion
MMIC	monolithic microwave integrated circuit	$\mu$ P	microprocessor
MMU	memory management units	$\mu$ SR	muon spin rotation (resonance)
MNDO	modified neglect of differential overlap	MUF	material unaccounted for <i>or</i> maximum usable frequency
MNOS	metal-nitride-oxide-semiconductor	MUMPS	Multi-User Multi-Programming System
MO	molecular orbitals	MUSE	multiple sub-Nyquist sampling encoding
		MUSIC	multiple signal characterisation
		MV	medium voltage
		MVTL	modified variable threshold logic
		MWPC	multiwire proportional chamber

NAA	neutron activation analysis	NSRR	Nuclear Safety Research Reactor
NAL	National Accelerator Laboratory	NSSS	nuclear steam supply system
NAND	NOT-AND (logic)	NTD	neutron transmutation doping
NAPLPS	North American Presentation Level Protocol Syntax	NTE	network termination equipment
NASA	National Aeronautics and Space Administration	NTL	nonthreshold logic
NATO	North Atlantic Treaty Organisation	NTSC	National TV Standards Committee
NBETF	Neutral Beam Engineering Test Facility	NTU	network termination unit
NBFM	narrowband frequency modulation	NVL	night vision laboratory
NBI	neutral beam injection	NVRAM	nonvolatile random access memory
NBPS	neutral beam power systems	NWA	network analyser
NC	numerical control	NWPA	Nuclear Waste Policy Act (USA)
NCAR	National Center for Atmospheric Research (USA)	OA	office automation
NCBR	nitride cooled breeder reactor	OAM	operations, administration and maintenance
NCMET	non-closed shell many electron theory	OAM&P	operations, administration, maintenance and provisioning
NDDO	neglect of diatomic differential overlap	OBIC	optical beam induced current(s)
NDE	nondestructive evaluation	OCR	optical character recognition
NDO	neglect of differential overlap	OCRWM	Office of Civilian Radioactive Waste Management (USA)
NDR	negative differential resistance	ODA	Office Document Architecture
NDRO	nondestructive readout	ODE	ordinary differential equation
NDT	nondestructive testing	ODMR	optical detection of magnetic resonance
NEA	negative electron affinity	OEIC	optoelectronic integrated circuit
NET	Next European Tokamak	OEM	original equipment manufacture(r)
NETD	noise equivalent temperature differential	OER	oxygen enhancement ratio
NEXAFS	near-edge X-ray absorption fine structure	OH	ohmic heating
NEXT	near-end crosstalk	OHTE	Ohmically Heated Toroidal Experiment
NGS	nuclear generating station	OISF	oxidation induced stacking fault
NHS	National Health Service (UK)	OMCVD	organometallic CVD
NIC	negative impedance convertor	OMI	optical mode interference
NICAM	near-instantaneously companded audio multiplex	OMVPE	organometallic vapour phase epitaxy
NIST	National Institute of Standards and Technology (USA)	ONA	open network architecture
NLC	nematic liquid crystal	ONO	oxide-nitride-oxide
NLP	natural language processing	OOP	object-oriented programming
NLTE	non-local thermodynamic equilibrium	OPAC	online public access catalogue
NMOS	n-channel MOS	OPGW	optical fibre composite ground wire
NMR	nuclear magnetic resonance	OPHF	orbital polarised Hartree-Fock
NMR-CN	NMR on oriented nuclei	OPW	orthogonal plane wave
NNI	network node interface	OQPSK	offset quadrature phase shift keying
NNDO	neglect of non-neighbour differential overlap	OR	operations research
NOAA	National Oceanic and Atmospheric Administration (USA)	ORELA	Oak Ridge Electron Linear Accelerator (USA)
NOFC	New Oxide Fuels Complex (BNFL)	ORNL	Oak Ridge National Laboratory (USA)
NOR	NOT-OR (logic)	OS	operating system
NOVA	nonoverlapping super-self-aligned	OSI	Open Systems Interconnection
NP	nondeterministic polynomial	OTA	operational transconductance amplifier
NPL	National Physical Laboratory (UK)	OTDR	optical time domain reflectometry
NPP	nuclear power plant	OTEC	ocean thermal energy conversion
NQR	nuclear quadrupole resonance	OTF	optical transfer function
NRC	Nuclear Regulatory Commission (USA)	OTH	over the horizon
NRD	nonradiative dielectric	OTS	Orbital Test Satellite
NRM	natural remanent magnetisation	OTSG	once-through steam generator
NRZ	non-return to zero	OZI	Okubo-Zweig-Lizuka (quark model)
NRZI	non-return to zero inverted	PAA	paraazoxyanisole
NS	Navier-Stokes (equations)	PABX	private automatic branch exchange
NSLS	National Synchrotron Light Source	PAC	perturbed angular correlation
		PACS	picture archiving and communication systems
		PAFC	phosphoric acid fuel cells



PAHR	post-accident heat removal	PIXE	photon induced X-ray emission
PAL	phase alternate line <i>or</i> programmable array logic	PLA	phase locked array <i>or</i> programmable logic array
PAM	programmable active memory <i>or</i> pulse amplitude modulation	PLBR	Prototype Large Breeder Reactor
PAP	paraazoxyphenetole	PLC	programmable logic control
PARS	private advanced radio service	PLCC	plastic leadless chip carrier
PBF	power bursts facility	PLD	programmable logic device
PBFA	Particle Beam Fusion Accelerator	PLEX	plant life extension
PBH	planar buried heterostructure	PLL	phase locked loop
PBL	planetary boundary layer	PLT	Princeton Large Torus
PBR	pebble bed reactor	PLZT	lead lanthanum zirconate titanate
PBT	permeable base transistor	PM	permanent magnet <i>or</i> phase modulation <i>or</i> pulse modulation
PBW	power-by-wire	PMDR	phosphorescence microwave double resonance
PBX	private branch exchange	PMMA	polymethylmethacrylate
PC	personal computer <i>or</i> printed circuit <i>or</i> programmable controller	PMOS	p-channel metal-oxide-semiconductor
PCAC	partially conserved axial currents	PMR	proton magnetic resonance
PCB	polychlorinated biphenyl <i>or</i> printed circuit board	PMS	pre-main sequence
PCES	phase change energy storage	PN	planetary nebula(e) <i>or</i> pseudonoise
PCI	pellet-cladding interaction	PNDO	partial neglect of differential overlap
PCILO	perturbative configuration interaction using localised orbitals	PNO-CI	pair natural orbital configuration interaction
PCILOCC	PCILO for crystal calculation	PNS	Pulsed Neutron Source
PCM	phase change material <i>or</i> pulse code modulation	PO	physical optics
PCN	personal communications network	POL	pair orthogonalised Lowdin
PCRv	prestressed concrete reactor vessel	PON	passive optical network
PCV	primary containment vessel	POPAE	protons on protons and electrons
PCX	plasma confinement experiment	POPOP	phenyl-oxazolyl-phenyl-oxazolyl-phenyl
PD	partial discharge	PORV	power operated relief valve
PDB	planar doped barrier	POS	point of sale
PDE	partial differential equation	POTS	plain old telephone service
PDF	probability density (distribution) function	PPB	parts per billion
PDH	plesiochronous digital hierarchy	PPDP/S	Pariser-Parr-Del Bene-Pople/Segal calculations
PDX	Poloidal Divertor Experiment	PPI	plan position indicator
PE	phase encoded	PPM	parts per million <i>or</i> pulse position modulation
PEC	photoelectrochemical cell	PPP	Pariser-Parr-Pople
PECVD	plasma enhanced CVD	QFP	plastic quad-flat-pack
PEEK	polyaryletheretherketone <i>or</i> polyetheretherketone	PRA	probabilistic risk assessment
PEEL	programmable electrically erasable logic	PRAM	parallel random access machine
PEM	photoelectromagnetic	PRDDO	partial retention of diatomic differential overlap
PEP	Positron Electron Photon (collider, Stanford, USA)	PREPP	Process Experimental Pilot Plant
PES	photoelectron spectra (-oscopy)	PRF	pulse recurrence (repetition) frequency
PET	polyethylene terephthalate <i>or</i> positron emission tomography	PRIME	positive resist images by dry etching
PETRA	Positron Electron Tandem Ringbeschleuniger Anlage	PRMA	packet reservation multiple access
PF	poloidal field <i>or</i> power factor	PRN	packet radio networks
PFBC	pressurised fluidised bed combustion	PROLOG	Programming in Logic (language)
PFM	pulse frequency modulation	PROM	Pockels readout optical modulator <i>or</i> programmable ROM
PFR	Prototype Fast Reactor	PS	proton synchrotron (CERN)
PGA	pin grid array	PSA	probabilistic safety assessment
PHWR	pressurised heavy water reactor	PSD	power shut-down <i>or</i> power spectral density
PIC	particle-in-cell	PSDN	packet switched data network
PID	proportional+integral+differential (derivative)	PSK	phase shift keying
PIPECO	photoion photoelectron coincidence	PSS	packet switching service <i>or</i> Packet SwitchStream (UK) <i>or</i> power system stabilisers
PIUS	process inherent ultimately safe	PSTN	public switched telephone network

PSU	power supply unit	RBOC	Regional Bell Operating Company
PTD	physical theory of diffraction	RBS	Rutherford backscattering
PTF	polymer thick film	RC	resistance-capacitance
PTFE	polytetrafluoroethylene	RCCB	residual current circuit breaker
PTH	plated through hole	RCD	residual current device
PTM	pulse time modulation	RCIC	reactor core isolation cooling
PTT	Posts, Telephones and Telegraphs Administration	RCS	radar cross-section <i>or</i> rapid cycling synchrotron <i>or</i> reactor coolant systems
PV	photovoltaic	RCTL	resistor-capacitor-transistor logic
PVC	polyvinyl chloride	RDBMS	relational DBMS
PVD	physical vapour deposition	RDS	Radio Data System
PVDF	polyvinylidene fluoride	RDSS	radio determination satellite service
PVER	pattern visual evoked response	REA	rod ejection accident
PWA	partial wave analysis	REELS	reflection electron energy loss spectra (-oscopy)
PWB	printed wiring board	RELP	residual excited linear prediction
PWBA	plane wave Born approximation	REM	reflection electron microscopy
PWIA	plane wave impulse approximation	REMPI	resonance enhanced multiphoton ionisation
PWM	pulse width modulation	RF	radio frequency
PWR	pressurised water reactor	RFI	radio frequency interference
PZT	lead zirconate titanate	RFP	reversed field pinch <i>or</i> request for proposals
QA	quality assurance	RFPR	reversed field pinch reactor
QAM	quadrature amplitude modulation	RFX	reversed field (pinch) experiment
QASK	quadrature amplitude shift keying	RG	renormalisation group
QBO	quasi-biennial oscillation	RGB	red, green, blue
QC	quality control	RGM	resonating group method
QCD	quantum chromodynamics	RHEED	reflection high energy electron diffraction
QDMBPT	quasi-degenerate MBPT	RHET	resonant hot electron transistor
QED	quantum electrodynamics	RHF	restricted Hartree-Fock
QFP	quad-flat-pack <i>or</i> quantum flux parametron	RIA	reactivity initiated accident
QFSK	quadrature frequency shift keying	RIBE	reactive ion beam etching
QFT	quantum field theory	RICH	ring imaging Cherenkov detector
QGP	quark-gluon plasma	RIE	reactive ion etching
QHD	quantum hadrodynamics	RINDO	Rydberg incomplete NDO
QHE	quantum Hall effect	RISC	reduced instruction set computer
QMD	quantum molecular dynamics	RKKY	Rudermann-Kittel-Kasuya-Yosida
QMF	quadrature mirror filter	RLC	resistance-inductance-capacitance
QORC	quadrature overlapped raised cosine	RLS	recursive least squares
QOSRC	quadrature overlapped squared raised cosine	RMS	root-mean-square
QPM	quark-parton model	RNA	ribonucleic acid
QPO	quasi-periodic oscillation	RNS	residue number system
QPR	quadrature partial response	ROM	read-only memory
QPRS	quadrature partial response signalling	ROXNOX	reoxidised nitrided oxide
QPSK	quaternary phase shift keying	RPA	random phase approximation
QRC	quasi-resonant converter	RPAE	RPA with exchange
QSO	quasi-stellar object (quasar)	RPC	resistive plate chamber/counter
QWITT	quantum well injection transit time	RPM	relaxation potential model <i>or</i> revolutions per minute
R&D	research and development	RPV	reactor pressure vessel <i>or</i> remote piloted vehicle
RACE	Research and Development in Advanced Communications Technologies in Europe	RS	Reed-Solomon
RAD	ribbon-against-drop	RT	room temperature
RAM	radar absorbing material <i>or</i> random access memory <i>or</i> reliability, availability and maintainability	RTA	rapid thermal annealing
RAMDAC	random access memory digital/analogue convertor	RTD	resonant tunnelling diode
RAN	radio area network	RTG	radioisotope thermoelectric generators
RBE	relative biological effectiveness	RTI	road traffic informatics
RBMK	light water cooled, graphite moderated reactor	RTL	resistor-transistor logic <i>or</i> register transfer level
		RTN	rapid thermal nitridation



RTO	rapid thermal oxidation	SEED	self-electrooptic effect device
RTP	rapid thermal processing	SEG	selective epitaxial growth
RTT	resonant tunnelling transistor	SEL	surface emitting laser
RTTY	radio teletypewriter <i>or</i> remote teletype terminal	SEM	scanning electron microscopy
RVB	resonating valence bond	SEP	somatosensory evoked potential
		SERC	Science and Engineering Research Council
S/H	sample and hold	SERS	surface enhanced Raman scattering
S/N	signal-to-noise	SETI	search for extraterrestrial intelligence
SAA	Systems Application Architecture	SEU	single event upset
SAG	self-aligned gate	SEXAFS	surface extended X-ray absorption fine structure
SAINT	self-aligned implantation for N <sup>+</sup> -layer technology	SFE	solar-flare effect
SAIR	synthetic aperture interferometric radar	SFL	substrate-fed logic
SAM	scanning acoustic microscopy <i>or</i> scanning Auger microscopy <i>or</i> serial access memory	SFM	scanning force microscopy
SAMO	simulated ab initio molecular orbitals	SGEMP	system generated electromagnetic pulse
SAMOS	stacked gate avalanche injection metal-oxide-semiconductor	SGHWR	steam generating heavy water reactor
SAMPLE	simulation and modelling of profile in lithography and etching	SGML	Standard Generalized Markup Language
SAN	small area network	SGMP	sol-gel microsphere pelletisation
SANS	small-angle neutron scattering	SHF	superhigh frequency
SAR	synthetic aperture radar	SHG	second harmonic generation
SARSAT	search and rescue satellite aided tracking	SHOOT	superfluid helium on-orbit transfer
SAW	surface acoustic waves <i>or</i> self-avoiding walk	SHR	self-healing rings <i>or</i> South Hall Ring (MIT-Bates)
SAXS	small-angle X-ray scattering	SHV	superhigh voltage
SBE	super birefringence effect	SI	semi-insulating <i>or</i> Systeme Internationale
SBH	strip buried heterostructure	SICOS	sidewall base contact structure
SBLOCA	small break LOCA	SIF	stress intensity factor
SBS	stimulated Brillouin scattering	SIL	single-in-line
SC	switched capacitor	SIMD	single instruction, multiple data
SCADA	supervisory control and data acquisition	SIMOS	stacked-gate injection MOS
SCARA	selective compliance assembly robot arm	SIMOX	separation by implantation of oxygen
SCC	stress corrosion cracking	SIMS	secondary ion mass spectra (-oscopy)
SCF	self-consistent field	SIN	Swiss Institute of Nuclear Research
SCFL	source-coupled FET logic	SINDO	scaled incomplete NDO
SCH	separate confinement heterostructure	SIPOS	semi-insulating polycrystalline silicon
SCL	space charge limited	SIR	Safe Integral Reactor
SCM	subcarrier multiplex(ing)	SIS	semiconductor-insulator-semiconductor <i>or</i> superconductor-insulator-superconductor
SCPC	single channel per carrier	SISAM	spectrometer with interference selective amplitude modulation
SCR	silicon controlled rectifier	SISFET	semiconductor-insulator-semiconductor FET
SCSI	Small Computer System Interface	SISO	single input, single output
SCTF	Slab Core Test Facility	SIT	static induction transistor
SDF	synthetic discriminant function	SLAC	Stanford Linear Accelerator
SDFL	Schottky-diode FET logic	SLAM	scanning laser acoustic microscopy
SDH	synchronous digital hierarchy	SLC	smectic liquid crystal <i>or</i> Stanford Linear Collider
SDI	selective dissemination of information <i>or</i> Strategic Defense Initiative (USA)	SLD	strict logical determinacy
SDL	Specification and Description Language	SLIA	Spiral Line Induction Accelerator
SDLC	synchronous data link control	SLIC	subscriber line interface circuit
SDM	space division multiplexing	SLM	spatial light modulator
SDMA	space division multiple access	SLSF	Sodium Loop Safety Facility
SDW	spin density wave	SMA	surface mount(ed) assembly
SEAM	scanning electron acoustic microscopy	SMATV	satellite master antenna television
SED	stochastic electrodynamics	SMC	Small Magellanic Cloud <i>or</i> surface mount(ed) component
		SMD	surface mount(ed) device
		SMDS	switched multimegabit data service

SMES	superconductive magnetic energy storage	SRMCASE	symmetry-restricted-multiconfiguration annihilation of single excitations
SMIF	standard mechanical interface	SRO	short-range order
SMOBC	solder mask over bare copper	SRS	stimulated Raman scattering
SMPS	switched mode power supply	SRV	safety release valve
SMQORC	staggered modified quadrature overlapped raised cosine	SS	spread spectrum
SMT	surface mount(ed) technology	SS-TDMA	satellite switched TDMA
SN	supernova(e)	SS7	Signalling System No.7
SNA	Systems Network Architecture	SSB	single sideband
SNM	special nuclear material	SSBW	surface skimming bulk wave
SNMP	simple network management protocol	SSC	sudden storm commencement <i>or</i> Superconducting Super Collider
SNR	signal-to-noise ratio <i>or</i> supernova remnant	SSCR	spectrum shift controlled reactor
SNS	spallation neutron source <i>or</i> superconducting normal superconducting	SSFL	Schottky-barrier coupled Schottky-barrier gate FET logic
SOA	safe operating area	SSFLC	surface stabilised ferroelectric liquid crystal
SOFC	solid oxide fuel cells	SSI	small scale integration
SOG	spin on glass <i>or</i> strongly orthogonal geminal <i>or</i> sea-of-gates	SSMA	spread spectrum multiple access
SOI	silicon on insulator	SSNTD	solid-state nuclear track detector
SOIC	small outline integrated circuit	SSR	subsynchronous resonance
SOL	scrape-off layers	SST	sea surface temperature <i>or</i> supersonic transport <i>or</i> super self-aligned technology
SONET	synchronous optical network	SSV	structured singular value
SOP	small outline package	STD	salinity-temperature-depth <i>or</i> subscriber trunk dialling
SOR	successive over-relaxation <i>or</i> synchrotron orbital radiation	STEC	solar thermal energy conversion
SOS	silicon on sapphire	STEM	scanning transmission electron microscopy
SOT	small outline transistor	STI	scientific and technical information
SPA	separated pair approximation	STL	Schottky transistor logic
SPARC	scaleable processor architecture <i>or</i> Standards Planning and Requirements Committee (of ANSI)	STM	scanning tunnelling microscopy <i>or</i> synchronous transfer mode
SPC	statistical process control <i>or</i> stored program control	STN	super twisted nematic
SPCP	single parity check product (code)	STO	Slater-type orbitals
SPE	solid phase epitaxy	STOL	short take-off and landing
SPEAR	Stanford Positron Electron Asymmetric Ring	STP	Slater-transfer Preuss
SPECT	single photon emission computerised tomography	STS	scanning tunnelling spectra(-oscopy)
SPICE	Simulation Program with Integrated Circuit Emphasis	SURMAC	surface magnetic confinement
SPLEED	spin polarised low energy electron diffraction	SUSY GUT	supersymmetric grand unified theory
SPN	stochastic Petri net	SVC	static VAr compensator
SPRITE	signal processing in the element	SVD	singular value decomposition
SPS	Super Proton Synchrotron (CERN)	SW	short wave
SPUDT	single-phase unidirectional transducer	SWAMI	sidewall masked isolation
SQAM	superposed quadrature amplitude modulation	SWEPP	Stored Waste Examination Pilot Plant
SQC	statistical quality control	SWR	sodium water reactor <i>or</i> standing wave ratio
SQL	Structured Query Language	SXAPS	soft X-ray appearance potential spectra (-oscopy)
SQPR	staggered quadrature partial response	SXLS	Superconducting X-ray Lithography Source
SQPSK	staggered quadrature PSK	T/R	transmit/receive
SQS	self-quenching streamer chamber	TAB	tape automated bonding
SQUID	superconducting quantum interference device	TACS	Total Access Communications System
SQW	single quantum well	TASI	time assignment speech interpolation
SR	synchrotron radiation	TAT	transatlantic telephone cable
SRAM	static random access memory	TBBA	terephthal-butylaniline
SREMP	source region electromagnetic pulse	TBDF	transborder data flow
SRM	switched reluctance motors	TCAS	traffic alert and collision avoidance system
		TCE	temperature coefficient of expansion



TCM	trellis coded modulation	TMX-U	Tandem Mirror Experiment-Upgrade
TCNE	tetracyanoethylene	TNS	The Next Step
TCNQ	tetracyanoquinodimethane	TOF	time-of-flight
TCP/IP	Transport Control Protocol/Internet Protocol	TOFMS	time-of-flight mass spectra
TCR	temperature coefficient of resistance or thyristor controlled reactor	TOP	Technical Office Protocol or transient overpower accident
TCXO	temperature compensated crystal oscillator	TPAD	time differential perturbed angular distribution
TDDb	time dependent dielectric breakdown	TPC	time projection chamber
TDF	Technology Demonstration Facility or transborder data flow	TPD	temperature programmed desorption
TDHF	time dependent Hartree-Fock	TPTF	Two Phase Flow Test Facility
TDI	time delay and integration	TQM	total quality management
TDM	time division multiplex(ing)	TR <sup>3</sup>	time resolved resonant Raman (spectra (-oscopy))
TDMA	time division multiple access	TRAPATT	trapped plasma avalanche triggered transit
TDMF	time dependent mean field theory	TREAT	Transient Reactor Test Facility
TDPAC	time differential PAC	TRM	thermoremanent magnetisation
TDR	time domain reflectometry	TRRR	time resolved resonant Raman (spectra (-oscopy))
TDRSS	tracking and data relay satellite system	TRU	transuranic (waste)
TDS	thermal desorption spectra (-oscopy)	TSC	thermally stimulated currents
TE	transverse electric	TSd	thermally stimulated desorption
TEA	transversely excited atmosphere	TSEE	thermally stimulated exo-electron emission
TED	transferred electron device	TSeF	tetraselenafulvalene (-inium)
TEGFET	two-dimensional electron gas FET	TSeT	tetraselenatetracene
TEM	transmission electron microscopy or transverse electromagnetic	TSIC	thermally stimulated ionic currents
TEO	transferred electron oscillator	TSM/PCD	tone sense multiple access/partial collision detection
TEOS	tetraethylorthosilicate	TSR	terminate and stay resident
TEXT	Texas Experimental Tokamak	TSTA	Tritium Systems Test Facility
TF	toroidal field	TTC	telemetry tracking and command
TFCX	Toroidal Fusion Core Experiment	TTF	tetrathiafulvalene (-inium)
TFEL	thin film electroluminescent	TTL	transistor-transistor logic
TFT	thin film transistor	TTMP	transit time magnetic pumping
TFTR	Tokamak Fusion Test Reactor	TTT	temperature-time-transformation or tetrathiatetracene
TGA	thermogravimetric analysis	TTY	teletype terminal
TGFB	triglycine fluoroberyllate	TUCA	transient undercooling accident
TGS	triglycine sulphate	TUCOP	transient undercooled overpower accident
TGSe	triglycine selenate	TUNNETT	tunnel transit time
THF	tremendously high frequency	TV	television
THORP	Thermal Oxide Reprocessing Plant	TVRO	TV receive only
THORS	Thermal Hydraulic Out-of-Reactor Safety Facility	TW	travelling wave
THTF	Thermal Hydraulic Test Facility	TWA	travelling wave amplifier
TID	travelling ionospheric disturbance	TWOA	travelling wave optical amplifier
TIG	tungsten inert gas	TWT	travelling wave tube
TIL	two interdigitation level	TWTA	TWT amplifier
TJS	transverse junction stripe	UART	universal asynchronous receiver transmitter
TLD	thermoluminescent dosimeter (-ry)	UCHF	uncoupled Hartree-Fock
TLM	transmission line matrix	UCN	ultra cold neutrons
TM	transverse magnetic	UHF	ultra high frequency or unrestricted Hartree-Fock
TMC	test module coil	UHPS	underground hydroelectric pumped storage
TMHR	tandem mirror hybrid reactor	UHV	ultra high voltage
TMI	Three Mile Island	UIMS	user interface management system
TMMC	tetramethylammonium manganese chloride	UJT	unijunction transistor
TMN	telecommunications management network	UKAEA	United Kingdom Atomic Energy Authority
TMR	tandem mirror reactor		
TMS	truth maintenance system		
TMTSF	tetramethyltetraselenafulvalene (-inium)		
TMTTF	tetramethyltetrathiafulvalene (-inium)		

ULA	uncommitted logic array	VSEPR	valence shell electron pair repulsion
ULF	ultra low frequency	VSI	voltage source inverter
ULSI	ultra-large scale integration	VSP	vertical seismic profiling
UMD	unitised microwave devices	VSS	variable structure systems
UNI	user-network interface	VSWR	voltage standing wave ratio
UPS	ultraviolet photoelectron spectra (-oscopy) <i>or</i> uninterruptible power supply	VTOL	vertical take-off and landing
US	ultrasonic	VTR	video tape recorder <i>or</i> voltage transformation ratio
USART	universal synchronous/asynchronous receiver transmitter	VUV	vacuum ultraviolet
UTD	uniform theory of diffraction	VVER	water moderated water cooled reactors
UUT	unit under test	VVVF	variable voltage variable frequency
UV	ultraviolet	VXibus	VMEbus extension for instrumentation
VAD	vapour phase axial deposition	WAN	wide area network
VAN	value added network	WARC	World Administrative Radio Conference
VANS	value added network services	WASP	WSI associative string processor
VAWT	vertical axis wind turbine	WATS	wide area telecommunications service
VB	valence bond	WAXS	wide-angle X-ray scattering
VBL	vertical Bloch line	WDF	wave digital filter
VCCS	voltage controlled current source	WDM	wavelength division multiplex(ing)
VCO	voltage controlled oscillator	WECS	wind energy conversion system
VCR	video cassette recorder	WHT	Walsh-Hadamard transform
VCSEL	vertical cavity surface emitting laser	WIMP	weakly interacting massive particle <i>or</i> windows, icons, mice, pull-down menus
VCVS	voltage controlled voltage source	WIP	work in progress
VCXO	voltage controlled crystal oscillator	WIPP	Waste Isolation Pilot Plant
VDM	vector dominance model <i>or</i> Vienna Development Methodology	WKB	Wentzel-Kramers-Brillouin
VDMOS	vertical double diffused MOS	WORM	write once, read many times
VDT	visual display terminal	WP	word processing
VDU	visual display unit	WR	Wolf-Rayet
VDW	van der Waals	WSI	wafer scale integration
VER	visual evoked response	WWER	water moderated water cooled reactors
VFD	vacuum fluorescent display	WYSIWYG	what you see is what you get
VFO	variable frequency oscillator	WZW	Wess-Zumino-Witten
VGA	Video Graphics Array	XANES	X-ray absorption near edge structure
VHDL	VHSIC Hardware Description Language	XLPE	cross-linked polyethylene
VHF	very high frequency	XLS	X-ray Lithography Source
VHPIC	very high performance integrated circuit	XOR	exclusive OR (logic)
VHSIC	very high speed integrated circuit	XPD	cross-polarisation discrimination
VHSOL	very high speed optical loop	XPS	X-ray photoelectron spectra
VHV	very high voltage	XRD	X-ray diffraction
VI&P	visual, intelligent and personal (communications)	XTEM	cross-sectional transmission electron microscopy
VIPER	verified processor for enhanced reliability	XUV	X-ray-ultraviolet
VJFET	vertical junction FET	YAG	yttrium aluminium garnet
VLBI	very long base line interferometry	YIG	yttrium iron garnet
VLF	very low frequency	YTO	YIG tuned oscillator
VLIW	very long instruction word	ZBLAN	zirconium barium lanthanum aluminium sodium fluoride
VLSI	very large scale integration	ZBLANP	zirconium barium lanthanum aluminium sodium lead fluoride
VM	virtual machine	ZCS	zero current switching
VMOS	vertical channel MOS	ZEKE	zero kinetic energy
VOR	VHF omnidirectional range	ZGS	zero gradient synchrotron
VPE	vapour phase epitaxy	ZIF	zero insertion force
VQ	vector quantisation	ZMR	zone melting recrystallisation
VRAM	video random access memory	ZPPR	zero power plutonium reactor
VRC	visual record computer	ZTP	Z toroidal pinch
VS	virtual storage	ZVS	zero voltage switchin
VSAT	very small aperture terminals		
VSF	vestigial sideband		





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AFC see automatic frequency control

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# AGC see automatic gain control

age determination, radioactive see radioactive dating

age hardening see precipitation hardening

# ageing

see also precipitation hardening

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**AIX** *see Unix*

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**ALE** *see atomic layer epitaxial growth*

**Alfvén waves** *see solid-state plasma*

**Alfvén waves (plasma)** *see plasma Alfvén waves*

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## atomic structure

general aspects only; for specific aspects use appropriate terms, e.g. "electron correlations", "fine structure", "metastable states"  
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**atomic X-ray spectra** see *X-ray spectra*

**ATPG** see *automatic testing; integrated circuit testing; logic testing*

**ATR tubes** see *gas-discharge tubes; radar equipment*

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**CBT** see computer based training

**CCCS** see active networks

**CCD** see charge-coupled devices

**CCD circuits** see charge-coupled device circuits

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**CCD imagers** *see* **CCD image sensors**

**CCII** *see* **current conveyors**

**CCIR standards** *see* **standards**

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# cements (building materials)

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**cornea** see *eye*

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see also crystal growth from gel; liquid phase epitaxial growth

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**dark space** see discharges (electric)

**Darlington transistors** see bipolar transistors

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**DASD** see magnetic disc storage

**DAT** see digital audio tape

**data abstraction** see data structures

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## data acquisition

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EPR (insulation) see *ethylene-propylene rubber*

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**erythema** *see biological effects of ultraviolet radiation*

**erythrocytes** *see blood*

**Esaki diodes** *see tunnel diodes*

**Esaki effect** *see tunnelling*

**ESCA** *see electron spectroscopy; spectrochemical analysis; X-ray photoelectron spectra*

**ESD** *see electrostatic discharge*

**ESDI** *see peripheral interfaces*

**ESPI** *see electronic speckle pattern interferometry*

**ESPRIT** *see research initiatives*

**ESR** *see paramagnetic resonance*

**Estelle** *see specification languages*

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**faults, electrical** see electrical faults

**fax** see facsimile

**FD-TD analysis** see finite difference time-domain analysis

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**FDM** see frequency division multiplexing

**FDM/TDM translation** see transmultiplexing

**FDMA** see frequency division multiple access

**FTD analysis** see finite difference time-domain analysis

**FEA** see finite element analysis

**feature detection** see feature extraction

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**filters**

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**goal programming** *see mathematical programming*

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IKBS see knowledge based systems

PL see integrated injection logic

illumination see lighting

illumination control see lighting control

ILS see instrument landing systems

image amplifiers see image intensifiers

image classification

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integrated software

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**integrating spheres** *see photometry***integration**

*see also method of moments*

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**laser deposition**

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**laser diodes** *see semiconductor lasers*

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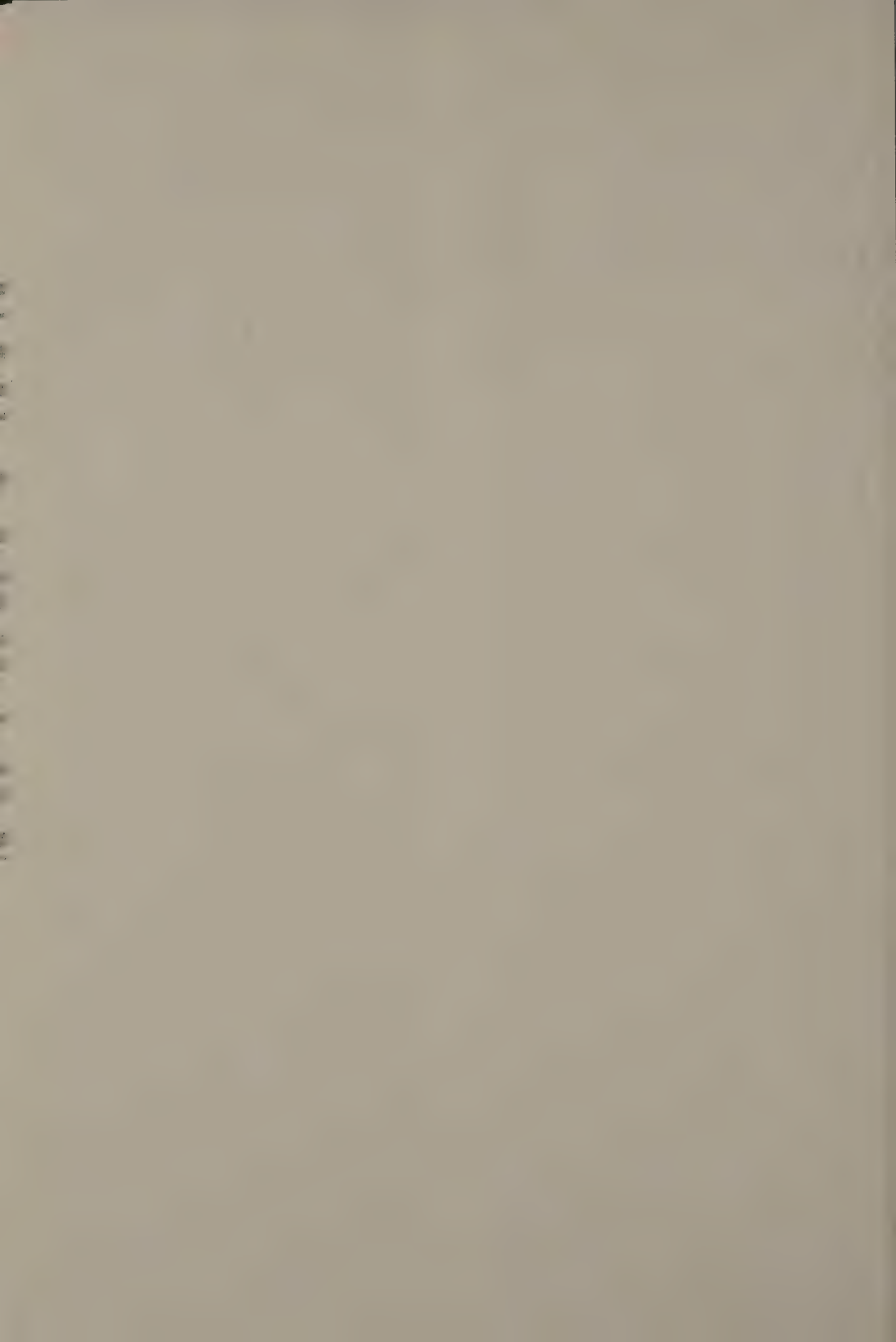






















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